

had discovered their communication with the testicles, and that they aided in the seminal secretion. *Senac* supposed they secreted the foetal meconium—and *Van Helmont*, that they secreted a juice endowed with lithontriptic powers, created by his archæus, to prevent the formation of renal calculi. *Lieutaud* viewed them as separating an acrid, penetrating liquor, very fit to prevent the formations of concretions in the vena cava. *Boerhaave* assigned them the function of correcting in the blood that flows from the kidneys, the fluidity of that liquid, impoverished by the loss which the secretion of urine causes. *Thaury* thinks they serve for almost the same use with the membrana adiposa; straining out a liquor, which by its long stay, becomes oily, then throws it into the veins, whereby the blood, stripped of its fluidity by the secretion of its serous parts recovers its former state, &c. so that they do the same office to the blood of the cava, that the omentum does to that of the porta.—These are probably sufficient, I shall therefore only further mention *Morgagni's* opinion, or rather conjecture, for as such does he offer it, viz. that probably a humour filtered into the cavities, fitted to fill the receptaculum chyli and thoracic duct whilst the infant remained in utero, a time in which these parts receive no chyle from the intestines.

The opinion of *Molinetti*, which I most cheerfully credit him with, is in my estimation, so very superior to all the above crude and indigested notions, that I shall say no more on the subject. *Morgagni's* is the only one, I should regard in the least plausible; and I think, had he ascribed to the, (so called,) thymus gland, those functions thus given to the renal capsules, that he would have probably been correct in such an opinion; an opinion I believe not before taken of that organ, but which a frequent reflection on the subject has led me occasionally to adopt, although I am far from laying any stress upon it, and consider it, (as *Morgagni* did his views of the uses of the capsules,) more in the light of conjecture, than as being founded on any fact of sufficient importance to give it the character of truth, further, than the apparent necessity of some fluid passing through the thoracic duct and receptaculum chyli, in order to keep them pervious for their important office after birth. By an accidental reference to *Horner's Anatomy*, I think the position assumed of the functions of the capsules is considerably strengthened. In a note, the doctor mentions the presence of this body, in a case of deficiency of the kidney.

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ART. III. *Case of Paruria Erratica, or Uroplania.\** By SALMON A. ARNOLD, M. D. of Providence, R. I.

MARIA BRENTON, aged 27 years, of sound constitution, generally enjoyed good health until June, 1820, when she was afflicted with a suppression of the catamenia, accompanied with haemoptysis. The medical attendants, irregular practitioners, bled her profusely

\* Some account of this very singular case, has been published in a Journal of limited circulation.

every other day, and after the system had become greatly debilitated, injudiciously administered emetics, the operation of which was succeeded by a prolapsus uteri, and a total inability to perform the function of urinary excretion. In this state she continued for nearly two years and a half without any alleviation of the disease, though for the most part of the time under the care of respectable physicians. The urine had been drawn off by the catheter, generally every twenty-four hours, but when this was neglected, she often perspired very profusely about the lumbar region.

In September, 1822, soon after I first saw her, the bladder not having been emptied by the catheter for seventy-two hours, the urine found an outlet by the *right ear*, oozing drop by drop, and continued for several hours after the bladder had been emptied. The next day, at five o'clock, P. M. the discharge from the ear again commenced and continued about as long as on the preceding, but a larger quantity was poured out. The fluid was thrown on a heated shovel, and gave out the odour so peculiar to urine, indicating the presence of urea. The discharge was repeated daily for several days, oozing out guttatum, commencing earlier, increasing in quantity, and being discharged in less time; then twice a day, at three and seven o'clock, P. M. varying but very little for some days; then three times a day, at two, nine, and eleven o'clock, P. M. and continuing subsequently four times a day, at ten o'clock, A. M. and four, eight, and eleven o'clock, P. M. increasing gradually in quantity, and being discharged in less time, until a pint was discharged in fifteen minutes in a stream about the size of a crow quill; then becoming more irregular, being discharged every four hours, and increasing in quantity, until eighty ounces were discharged in twenty-four hours. The discharge from the ear was accompanied by a severe pain over the right eye and about the right ear, with a distressing sensation of fulness. The pain commenced early in the morning, and continued to increase in violence until after the discharge from the ear, by which it was relieved.

When the urine was not discharged at the usual period, or much diminished in quantity, the pain and distress were most excruciating, producing delirium, during which confinement was frequently necessary to prevent her from doing violence to her head. Sometimes a deficiency in the discharge would produce delirium, apparently without much pain; she would then laugh, sing, and converse very incoherently, though frequently with an unusual degree of wit and humour. At other times she would be seized with violent spasms, resembling opisthotonus; and after continuing in this situation for a few minutes,

the muscles becoming relaxed, she would heave a deep sigh, and then swoon, and remain in an insensible state for about half an hour, when she would sob, perhaps open her eyes, and after repeatedly sighing would again become insensible. In this condition she would frequently remain for more than twelve hours in succession. Sometimes the spasms would be unaccompanied with swooning; at one time her jaws were firmly closed for twenty-four hours, so that it was impossible to force them open, and at another time they continued closed for more than three days. The swooning would frequently be unaccompanied with spasm, and she would continue insensible for more than twenty-four hours, the pulse imperceptible at the wrist, and respiration only perceptible by the nicest observation. The sight of the right eye was soon destroyed, and frequently that of the left was so impaired that she could not distinguish any object across the room, but the latter is now entirely restored. The hearing of the right ear is much impaired, she cannot distinguish sounds with it, and there is a constant confused noise heard by her like the roaring of a distant water-fall. For a short time previous to the discharge from the ear, there is a very audible noise, resembling that produced by water slowly dropping into a vessel, which may be heard at the distance of several feet. She has no power, excepting by an inclined position of the head, over the discharge, previously to which there is a painful sensation of fulness and a burning heat about the right ear. The next outlet the urine found was by the left ear, a few moments previous to which discharge, a noise is heard similar to that noticed in the right ear: she cannot hear distinctly for ten or fifteen minutes before and after the urine passes off. This discharge is very irregular, sometimes three or four times a week and then is discontinued for months. Soon after the discharge from the left ear, the urine found another outlet by the *left eye*, which commenced weeping in the morning and continued for several hours, producing considerable inflammation. It continued three days and then ceased; a sufficient quantity of the fluid was saved to test its properties; in which, as well as in appearance it did not differ from the discharge from the ear.

In the summer of 1824, it recommenced and continued daily for about six weeks. An account of the quantity of this discharge may be found in the appendix.

On the 10th of March, 1823, urine began to be discharged in great quantities from the *stomach*, unmixed with its contents. The greatest quantity was generally discharged in the morning before taking food, but it was frequently discharged soon after food had been taken,

with which it was often entirely unmixed. This discharge has been more regular than from the left ear and eyes, but less so than from the other outlets.

On the 21st of April, the *right breast* became tense and swollen, with considerable pain, and evidently contained a fluid, a few drops of which oozed from the nipple. The swelling and pain continued about twenty-four hours, and then entirely ceased for about a week, when it again returned, and there was discharged a light yellow fluid resembling urine. On the 29th, one ounce was caught in a nipple shell, which, by analysis, was found to contain urea. This discharge has been very regular up to this time. Urine has been discharged occasionally from the left breast, an account of which may be found in the appendix.

*November 20th, 1823*, the urine from the breast became milky, having the appearance of milk considerably diluted with water; this continued until December 12th, when it gradually resumed its usual colour.

*May 10th, 1823*, the abdomen about the hypogastric and umbilical region became violently and spasmodically contracted into hard lumps, and a sharp pain was felt shooting up from the bladder to the umbilicus, around which there was a severe twisting pain; in a few days subsequently a loud noise was heard, similar to that produced by drawing a cork from a bottle, and immediately afterwards urine spirted out from *the navel*, as from a fountain. This discharge has since continued, and has rarely been interrupted for many days. Nature wearied in her irregularities made her last effort, which completed the phenomena of this case, and established a discharge of urine from *the nose*. This discharge commenced on the 30th of July, 1823, oozing in the morning guttatum and increasing in quantity every day until it ran off in a considerable stream. It continued daily for about two months, when it ceased until the summer of 1824, and then again commenced, and continued almost daily for some months, since when, it has entirely ceased. All the fluids discharged were found by analysis to contain urea.

The following is the analysis of the fluid discharged from the right ear, made in New Haven, under the direction of Professor Silliman: "Alkaline sulphates were indicated by muriate of barytes and acetic acid; muriates were detected by nitrate and acetate of silver, and by nitrate of mercury; phosphates were ascertained to exist by the addition of caustic, ammonia, and lime water. Urea was obtained in the usual manner, by evaporating the fluid, and redissolving in al-

coho, and again evaporating." The urine discharged from the ear was, during the first six months, hotter than that from the bladder, producing by its heat pain in the external ear. The urine from the bladder turned black when not drawn off at the usual period, and deposited a sediment resembling black sand. Sometimes after this black sediment was precipitated, the fluid would be of a dingy yellow colour, at other times it would be as black as ink. The urine from the bladder was frequently of a very high colour before it turned black, but often turned black when it was as perfectly limpid as spring water, and on several occasions it has been noticed that when it was most limpid the largest quantity of black sediment was precipitated.

The discharges from the other outlets have, occasionally, all turned black; a more particular account of which may be found in the appendix. They differ, however, in one respect from the discharge from the bladder, since from the bladder it has never come off black, while it has from all the other outlets. This changing of colours in all the discharges from the different outlets, at the same time, is a most convincing proof of the identity of the fluids discharged.

Since the obstruction of the catamenia, there has been a discharge of blood supposed to be vicarious: it has generally come on every five or eight weeks, sometimes at the regular period. For the first two years there was a discharge of blood, occasionally from the stomach and lungs; from the right and left ear, oftener from the left; from the right and left breast, more frequently from the left; from the navel and from the nose. From the nose and the right ear, it has generally been mixed with urine, nearly three-fourths urine; from the left ear with about equal parts urine and blood; from the stomach and lungs, with the contents of the stomach and the secretions of the fauces; from the left breast and navel it has generally been unmixed with any other fluid. It was frequently fetid—the colour always dark—it sometimes, though not generally, coagulates. When the urine was not drawn from the bladder for forty-eight hours, or longer, the quantity found in it was always less than when drawn off every twenty-four hours. Sometimes when the urine was not drawn off from the bladder for seventy-two hours, it would be found to contain only one or two ounces. From which I was induced to believe that the discharge from the bladder was almost entirely useless, and that the functions of the system might be performed with very little disturbance, without the excretory office of the bladder. Accordingly I omitted to draw off the urine for seven days, when three ounces only were found in the bladder, during which period,

the discharges from all the other outlets were increased, and her health did not appear to have in the least suffered. Both the quantity of fluid drank, and the quantity discharged from all the outlets during the twenty-four hours, was for several days ascertained and the difference found small. When the urine was drawn off from the bladder, two or three times a day, the quantity discharged from all the other outlets, was much decreased, from which I was induced to think that if it should be drawn off every two or three hours, it would be prevented from passing into the system, and being discharged from the other outlets. I therefore introduced an elastic gum catheter, and directed the urine to be drawn off every two hours, but the catheter in half an hour would be filled up with a thick glutinous substance. This was frequently repeated with no better success. Numerous instruments were invented, and when used were all equally unsuccessful. Pessaries of every description and other means to restore the parts to their natural situation, were used, and for a long time continued without any advantage. The quantity of urine discharged from all the outlets was so great, and so much beyond what has been thought possible, that I was apprehensive there might have been some deception—to remove every doubt, I and my friend Dr. WEBB, who at my request had occasionally attended her, remained with her four hours alternately, during twenty-four hours, and the quantity discharged during this time was as large as it had been for several days previous to, and after this period. There has never been any doubt that these fluids, which have been proved to be urine, were actually discharged from the ear and the other outlets, since the fact has been proved, day after day, by ocular demonstration.

This great disturbance in the system continued to increase for nearly six months, and it was the opinion of all who saw the patient that she could not survive from day to day; after which period it gradually abated, and she is now, when the urine is freely discharged, so much relieved that she is able to walk about her room, and during the summer of 1824, frequently rode out. The discharges from the right ear, the right breast and navel, continue daily, but they are not so great nor so frequent as they were a year since; from the bladder the quantity is as usual; from the stomach, nose, eye, there has for some months been no discharge.

## APPENDIX.

A Diary of the Discharges, the appearances and changes in them, together with the most prominent symptoms from the period of the first discharge, until those from all the other outlets were established.

	Bladder.	Right ear.	OBSERVATIONS.
1822.			
Sept. 21	5 <i>oz</i>	5 <i>oz</i>	{ From the bladder on the 21st turned black, from the ear on the 21st, 22d, and 23d, not measured, but the quantity calculated from wet clothes.
22	16	5	
23	15	7	
24	14	10	Violent pain in the head relieved by a discharge from the ear—pulse 100—skin dry—tongue coated.
25	11	12	Pain increases with sensation of fulness—discharge guttatum—pulse 100.
26	12	13	Pain increases—pulse 100.
27	11	15	Pain very violent—discharge more rapid.
28	12	14	Pain more violent—pulse 120.
29	13	13	Skin dry and hot.
30	12	15	Tongue much coated.
Oct. 1	10	14	Pain more violent—urine from ear very high coloured—discharged in a stream the size of a crow-quill.
2	12	14	Four ounces of urine discharged in five minutes—pain commenced about ten, and increased in violence until five o'clock, when the urine was discharged and head relieved—light extremely painful—can scarcely discern objects with right eye.
3	24	14	Urine by catheter twice—discharge commenced two hours later—in other respects no change.
4	12	13	
5		14	Catheter from unavoidable cause not used.
6	4	17	Catheter used at ten o'clock, after an interval of thirty-six hours, during which thirty-two ounces from ear—and only four ounces from bladder—discharge commenced six hours earlier—from ear and bladder high-coloured—from bladder after standing a few hours turned black.
7	30	15	Catheter used morning and evening—pain in head violent—other symptoms unchanged.
8			{ Introduced an elastic gum catheter, and directed urine to be drawn off every two or three hours—catheter filled with a thick viscid substance—urine not drawn off every thirty-six hours—complains of urinous taste
9	16	67	—face and feet oedematous—urine from bladder turned black as ink, and deposited considerable sediment—pulse 120—symptoms unchanged.
10			
11	6	24	Witnessed discharge of ten ounces in fifteen minutes.
12	18	33	Commenced guttatum and increased to the size of a crow-quill—from the ear much hotter—higher coloured—urinous odour stronger than from bladder—pulse 120.
13	14	57	Nine ounces discharged in the presence of John Mackie, M. D. and Mr. Webb, student of medicine, in about

	Bladder.	Right ear.	OBSERVATIONS.
1822.	On	On	
Oct. 14	14	43	half an hour—commenced oozing gradually, increasing to a stream the size of a crow-quill—produced pain from the heat, in which the thermometer rose to 104, and fell to 94 in that drawn from the bladder—from ear higher coloured and stronger urinous odour than from the bladder—less pain in the head.
15	13	40	Discharge from ear, ten o'clock, A. M. usual colour, after standing a few hours turned as dark as pale ink—four P. M. a large discharge, usual colour—in about two hours turned a darker colour than that discharged in the morning—eight P. M. eight ounces discharged in presence of Messrs. Fales and Willard, students of medicine, darker than previous discharge, nearly as black as the black urine from bladder—from bladder turned black after standing a few hours and deposited a sediment resembling black sand—pain and heat in head most excruciating—eyes inflamed—pupils dilated—hearing of right ear impaired—pulse 140—skin dry—tongue coated—very thirsty—drinks freely.
16	14	48	From ear dark coloured—sediment resembling black sand is deposited—proportion of sediment one-third—other symptoms same as yesterday.
17	16	64	From ear muddy, but lighter than yesterday—from bladder turned black upon standing a few hours—pulse 140—in great distress.
18	12	62	From ear straw colour—from bladder same; vomited six ounces of blood—dark coloured—soon coagulated.
19	20	65	By catheter twice—witnessed discharge of twelve ounces from ear in five minutes, previously to which the bladder was emptied.
20	35	44	By catheter three times—pain in head increases—eyes more painful—is wild and delirious—pulse 140—tongue coated and dry.
21	20	45	From bladder twice—symptoms unchanged.
22	17	64	By catheter twice.
23	16	70	By catheter twice—respiration laborious, other symptoms unchanged.
24	15	48	By catheter twice—respiration more laborious—head more painful—right side is numb previously to discharge from ear, by which relieved.
25	16	63	By catheter twice.
26	15	80	Pain in head relieved—other symptoms same.
27	20	50	
28	8	80	
29	16	64	
30	14	50	
31	16	48	
Nov. 1	12	45	
2	16	40	
			Symptoms relieve

	Bladder.	Right ear.	OBSERVATIONS.
1822.			
Nov. 3	12	8	Convulsed throughout the day—spasms very violent.
4	6	12	Spasms violent—respiration laborious—palpitation of heart—symptoms indicating hydrothorax.
5	14	10	{ Spasms and other symptoms continue—pulse 140—skin
6	4	12	{ hot and dry.
7	16	8	Spasms continue—other symptoms relieved.
8	14	18	Spasms relieved.
9	14		Spasms very violent—pain excruciating—accompanied by sensation of fulness and weight—palpitation.
10	16		Spasms more violent—pain and sensation of fulness continue—respiration laborious—palpitation increases—eyes very painful—pulse 150.
11	15	12	Pain in head relieved.
12	14	10	Less pain in head—difficulty of respiration increases.
13	14		Pain in head more violent, accompanied by delirium.
14	6		Pain in head excruciating—delirium increases.
15	12	16	{ Pain in head and delirium continue.
16	14	8	{ Delirium relieved—spasms increase.
17	15	10	Delirium relieved in some degree after discharge from ear—pain in head and other symptoms continue.
18	12	1	{ Delirium relieved—spasms increase.
19	14	8	Spasms relieved—vomited four ounces of blood—dark colour.
20	14	24	From Nov. 21st to Dec. 7th, from unavoidable causes no history of case.
21	9	15	Violent pain in head with sensation of fulness—and burning heat about right ear delirium—skin hot and dry—tongue much coated—pulse 140.
Dec. 7	8		{ Pain in head increases—other symptoms continue.
8	10		Pain in head excruciating—other symptoms continue.
9	20		Pain in head and delirium in some degree relieved.
10	1		{ Delirium increases—pain in head more violent.
11	20	16	{ Delirium continues—less pain in head.
12	14		From the 15th to 22d, no discharge from ear—from bladder rather more than usual quantity, not measured—delirium violent—pain in head most excruciating with sensation of fulness—burning heat about right ear—pulse 150—palpitation—skin dry—tongue coated.
13	16		{ Pain in head relieved after discharge from ear—other symptoms same.
14	10	12	{ Pain in head more violent.
15	12	8	From 27th to 31st of December, no discharge from ear—increased quantity from bladder—increased delirium—violent pain in head—pulse 150.

	Bladder.	Right ear.	OBSERVATIONS.
1823.			
Jan. 1	3	3	
2	12	32	
3	14	32	
4	52		
5	2	50	
6	3	26	
7	8	66	
8	12	60	
9	12	47	
10	8	50	
11	12	6	Pain in head increases—spasm and swooning alternately.
12	8	12	Pain in head relieved—spasm and swooning not so frequent.
13	12	30	
14	12	39	
15	14	25	Urine discharged from left ear—about half an ounce saved—in odour and colour does not differ from discharge from right ear.
16	12	8	Pain in head more violent—swooning frequent—pulse 140.
17	10	8	Swooned ten times—sometimes remains insensible more than an hour.
18	8	12	
19	2	20	
20	12		
21	8	12	
22			
23			
24			
25	16	32	Urine from bladder turned black—swooning relieved.
26	16	32	Delirium from 21st to 25th so wild and raving as to suffer no one to come near her—on 24th no urine from ear, though the usual sensation of heat and fulness generally felt previously to the discharge—urine discharged from left eye guttatum about two hours in the morning.
27	16	32	From ear when discharged, as black as pale ink—from bladder turned black after two hours—urine continues oozing from eye in morning—pain in head relieved—delirium continues—is very humorous—laughs and sings and talks incoherently—pulse 120.
28	16	32	More rational—swooning returns, succeeded by unusual numbness except in the fingers—pain changes from vertex and over the right eye to back of the head—urine continues weeping from eye—one ounce saved, does not differ from discharge from ear—pulse 120.
29	16	30	After swooning continued insensible for an hour—not the least sensation for several hours excepting about the windpipe—urine from eye ceased—pulse 121—pain in head continues.
30	12	28	
31	6	32	
Feb. 1	7		
	10	27	
	12	24	
			In evening from ear fourteen ounces in presence of Dr.

	Bladder.	Right ear.	Stomach.	OBSERVATIONS.
1823.	3	3	3	
Feb. 2	10	20		From ear colour of pale ink—from bladder turbid and turned black.
3	24			{ From ear turbid—though no urine from bladder, yet no distention—from left ear six ounces of
4	26			{ bloody urine.
5	30			
6	14			Violent pain in head—scalp tender and painful.
7	8	16		{ Head very painful—pulse 140.
8	8	12		
9	16	3		
10	8	4		
11		32		
12		28		
13		16		
14		17		
15		20		
16		17		
17		21		{ Pain in head relieved—pulse 100—urine from
18		8		{ bladder not measured.
19		16		
20		18		
21		14		
22		20		
23		18		
24		24		
25		18		
26	12	4		Violent pain and sensation of fulness in head.
27	10	6		{ Insensible—arousing every three or four hours
28	8	11		{ and immediately swooning—pulse 120.
Mar. 1	12	15		
2	12	18		
3	13	17		
4	12	20		
5	14	20		{ Swooning relieved—head less painful—pulse 100.
6	12	20		
7	12	21		
8	14	18		
9		14		
10	8	17	16	{ Urine from stomach, without much nausea, unmixed with its contents, colour light yellow—
11		16	18	{ from ear same—pulse 100—not much pain.
12	2		20	From bladder turned back—from stomach light yellow.
13		12	24	From ear deep—from stomach light yellow—discharge from stomach found by analysis to contain urea, and some of the salts found in urine.
14	18			From bladder turned black—pain and sensation of fulness in head.
15		16		Pain continues—urine high coloured.
16	16			From bladder turned black.

	Bladder.	Right ear.	Stomach.	OBSERVATIONS.
1823. Mar. 17	3 5	3 6	3 6	Spasms commenced at four P. M. and continued until two o'clock, A. M. in the muscles of the jaw, so violent that it was impossible to open the mouth. Spasms relieved—from bladder black.
18	16	20		
19	20	12		
20	18	8	12	Spasms returned.
21	14	16	18	
22	12	12		
23	14	16		Spasms relieved—from stomach mixed with blood.
24	12	18		
25	15	17		
26	12			Violent pain in head and delirium—pulse 120.
27	10	6		{ Pain and delirium continue—pulse 130.
28		16		
29	16	18	12	From bladder turned black—from other outlets light yellow—pain and delirium relieved—pulse 120.
30		16		
31	10	6	16	From bladder turned black.
Apr. 1	8		16	From stomach black as ink when thrown up.
2	10		8	Violent pain and sensation of fulness in head—delirium—pulse 140—sight of left eye impaired, right entirely destroyed.
3	6	8	16	From stomach and ear turbid, in few hours turned black—sensation of fulness in head—eyes very painful.
4	10	20		
5	12	16	4	
6	12	12		
7	10	16	18	
8	12	18		Pain in head in some degree relieved—eyes very painful—constant nausea accompanied discharge of urine from stomach.
9	20	30		
10	16	27		
11	8	16		
12	12	12	16	
13	7	18		
14			61	From stomach as black as ink when discharged—after which pain in head relieved—constant nausea.
15	6	4		From bladder black.
16	10		40	From stomach black.
17	12	18		Pain in head relieved.
18	8	30	28	From stomach black—from bladder high coloured—turned black in a few hours.
19	20		18	From bladder dark yellow with a reddish cast, turned black after standing a few hours—from stomach light yellow and turned black.
20	16	12	30	From ear usual colour, turned black in six hours—from stomach black—from bladder light straw colour, turned black in four hours—in less pain than she has been since urine was first discharged from ear—pulse 100.
21	20	16	48	From stomach black—from ear and bladder light yellow—from bladder turned black—tension and

	Bladder.	Right ear.	Stomach.	Right breast.	OBSERVATIONS.
1823.	On	On	On	On	swelling in right breast—few drops of a light yellow fluid oozes out.
Apr. 22	24	10	40		Urine from all outlets regained its natural colour—that from stomach has a very fetid smell and saline taste.
23	14	8	40		
24	22	12	64		From bladder straw colour—from ear pale black—from stomach came off in two portions—first twenty-eight ounces rather darker than natural—turned black after standing a few hours—the other thirty-six ounces of deep black—when discharged, dull pain in head.
25	16	8	64		From bladder deep orange—ear straw coloured—stomach a very deep black.
26	10	14	36		From bladder straw colour—ear little darker hue—stomach pale black—pain in head and delirium.
27	20	8			From bladder lighter than usual—ear deep orange, approaching to red—delirium continues—swooning—and spasms—pain and tension of right breast—few drops ooze from nipple—pulse 120—incubus.
28	18	15	34		From bladder light straw colour—ear dingy yellow—stomach natural colour—while present she put a thick cloth to her breast, in a few minutes was completely soaked with water, which had the smell of urine—when dropped upon a heated shovel threw off the pungent fumes so peculiar to this secretion, indicating the presence of urea.
29	14	16	46	1	From bladder light yellow—ear straw colour—stomach dirty yellow—breast light yellow.
30	16	16	44	7	From bladder and ear straw colour—stomach dirty yellow—breast partly white, and partly of yellowish cast—patient is rational, and complaining of nothing except a disagreeable sickness occasioned by the rank smell of urine from breast.
May 1	16	17	28	12	From bladder and ear straw colour—stomach dingy yellow—discharged considerable from stomach, and complains of gnawing pain.
2	14	16	50	8	From bladder light yellow—ear and stomach dingy yellow—breast three potions—1st. Reddish—2d. Limpid—3d. Considerably bloody, about the colour of currant wine.
3	8	9	32	18	From bladder light yellow—ear, stomach, and breast straw colour.
4	17	16	52	8	From bladder light yellow—rest dark colour.
5	18	17	57	12	
6	16	16	44	12	
7	17		40	13	
8	17	14	40	8	

	Bladder.	Right ear.	Stomach.	Right Breast.	Navel.	OBSERVATIONS.
1823. May 9	37 17	6	42 13	5	13	From bladder straw colour—stomach black—breast dark yellow—and turned black.
10						From unavoidable cause catheter not used.
11						
12						
13	6	18	28	6		From bladder deep yellow, and turned black—other outlets deep yellow.
14	30	13	42	12	10	From bladder light colour—turned black—from other outlets black—all deposited black sediment—feet and legs oedematous—urine begins to be discharged from navel.
15	14	15	76	10	6	From bladder dingy yellow—other outlets black—a small discharge from left ear.
16	18	13	54	4	24	From bladder light coloured—ear, stomach and breast black—navel dirty white—while urine is passing the navel she suffers a painful sensation like that which would be produced by a dagger being thrust into the body.
17	16	12		13	30	From bladder lemon yellow—ear and stomach dirty yellow—one portion from navel same as yesterday—others light yellow.
18	20	16			32	The whole lemon or yellow colour.
19	5	11	20	16	22	Colour same as yesterday.
20	24	16		7	27	From ear, stomach, and navel, like dirty water—breast black—bladder light yellow—sixteen ounces discharged from left ear.
21	18	10		13	16	From bladder nearly limpid without sediment—it soon turned black, and deposited a thick sediment—ear and breast light colour—navel high coloured and turned black—patient complains of tension and swelling of left breast—this affection differs from the right breast, being attended with a sensation of coldness—in the right is a fluctuation perceived by striking with the fingers—the left is hard and firm—constriction of chest and a saltish taste, which generally precedes the vicarious discharge from the lungs.
						Colour of all discharges light yellow—six ounces of thick dark coloured blood discharged from left breast in morning—pain and sensation of coldness and tension relieved—in evening, in presence of Dr. Webb, discharged a considerable quantity, which in colour resembled the expressed juice of the phytolacca de-

	Bladder.	Right ear.	Stomach.	Right breast.	Navel.	OBSERVATIONS.
1823.	On	On	On	On	On	
May 22	20			9	46	candra, and in smell sulphuretted hydrogen given off by putrid eggs.
23	20	17	12	14	60	Eighteen ounces discharged from left ear, colour deep yellow—six ounces from left breast tinged with blood.
24						The left breast continues painful—small discharge of reddish cast—from navel very high colour—from bladder limpid —others light yellow—the greater part discharged in morning previously to drinking.
25						{ No history of case.
26	12	12	14	8	8	From stomach dark colour.
27		12		8		
28	12	12		8		From bladder black—ear dark yellow.
29	2					Violent pain in head—sensation of swooning—pulse 150—eyes painful.
30	2	12				{ Symptoms continue.
31	10	16				
June 1	12	16		12		{ Less pain in head.
2	12	30		8		
3	14	32		6	8	{ Pain in head and swooning relieved.
4	10	34		6		
5	12	24		6		
6	14	20		8		
7	12	18		7		
8	10	24		9		Eight ounces of urine from left ear mixed with blood.
9	6	20				
10		16				
11	4	18		8		From bladder high coloured—turned black—ear and breast yellow.
12	8	12		8		From the 12th to 25th average quantity from ear twenty ounces—bladder eight ounces—breast six ounces.
						From 25th of June to 2d of July, no discharge from either outlet, though catheter used every day—violent pain in head with sensation of fulness—palpitation—delirium—pulse 150—tongue coated—restless—trembling—swooning.
						From 2d to 20th of July, average quantity from ear eighteen ounces—breast six ounces—bladder five ounces—occasionally discharge from navel.
July 21	4	16		8		Sixteen ounces discharged from left ear—colour as from right.
22	8	28				From right ear mixed with blood—twenty-eight ounces from left ear, light yellow—turned black in three hours.
23	4	18		8	4	From right ear tinged with blood—

		Bladder.	Right ear.	Stomach.	Right breast.	Navel.	Nose.	OBSERVATIONS.
1823.		3 <i>oz</i>						
July 24	14	16			8	12		fourteen ounces from left, light yellow.
25	16	20			8	8		From right ear mixed with blood—twelve ounces from left, yellow.
26	8	16			7			
27		18			8	16		
28	7	48			12	8		
29	8							From bladder usual colour—turned black.
30		20				16	6	Violent spasms.
31	12	32			8	16	10	Discharge of urine from nose—spasms less violent.
Aug. 1	12	24			8	10	12	From bladder black.
2	16	20			8	12	6	
3	16	16			8		16	
4		12			8		16	
5	12	16	15		8		16	From bladder black.
6	16	18	20		8		17	
7		16	22		16		12	
8	4	14	18		16	10	14	From bladder black.
9		28	17		16	12	13	

The following average is calculated from diaries kept by Messrs. Charles Goodwin and Joseph W. Fearing, (Medical students.)

Average quantity from August, 1823, to June, 1824—from bladder, twelve ounces—from right ear, eighteen ounces—from right breast, fifteen ounces—from navel, twenty ounces—from stomach, nose, eye, left ear, and left breast; the discharges have been so irregular that an average has not been calculated.

The following is an extract from the diary kept during the summer of 1824, by Mr. E. W. Greene, student of medicine, which is annexed to show the quantity daily discharged from the left eye.

		Bladder.	Right ear.	Stomach.	Breast.	Navel.	Nose.	Left eye.	OBSERVATIONS.
1824.									
July 20	16	15			12	13	2	2	
21	10	32			36	17	1	1 <i>½</i>	
22	16	30			16	10			
23	14	35			20	36	3	3	
24	10	32			8	16	14	13	
25	12	30			16	30	16		
26	20	46			16	38	16	6	
27	16	52			16	48	17	8	
28	12	40			17	37	16	6	
29	16	47			5	20	16	8	
30	10	54			16	44	16	5	Health much improved, and when discharges are regular, free from pain.